	Page in this Index
4. Ear and Hearing	
4.1 General, Unclassified	300
4.2 Anatomy and Physiology of the Ear	None
4.3 Binaural Hearing. Localization	300
4.4 Deafness (see also 5.5)	300
4.5 Instruments Relating to Hearing (see also 5.5)	300
4.6 Loudness. Threshold Determinations	300
4.7 Masking (see also 5.5)	301
4.8 Phase Effects (see also 4.3)	None
4.9 Pitch	None
4.10 Subjective Tones	None
4.11 Theories of Hearing	None
4.12 Timbre	None
4.13 Ear Acoustical Impedance	None
5. Applied Acoustics. Instruments and Apparatus	
5.1 General, Unclassified	301
5.2 Amplifiers	None
5.3 Acoustical and Mechanical Impedance Measurement (see also 11.4)	301
5.4 Analyzers and Filters. Acoustic Filters. Oscillographs (see also 5.15)	301
5.5 Audiometers (see also 4.4 and 4.5)	None
5.51 Broadcasting	301
5.6 Chronographs	None
5.7 Frequency Standards. Frequency Measuring and Recording Instruments. Hearing Instruments (see also 4.5 and 5.5)	None
5.8 Loudspeakers. Horns (see also 5.13 and 5.17)	301
5.9 Microphones. Vibration Microphones. Microphone Calibration Equipment	301
5.10 Navigational Instruments. Depth and Altitude Measuring Instruments. Geophysical Prospecting. Underwater Sound. Submarine Detectors	302
5.11 Oscillators	None
5.12 Phase Meters	None
5.13 Public Address Systems and Sound Picture Installation	None
5.14 Rayleigh Disks. Reverberation Measuring Instruments (see also 2.8)	None
5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement (see also 5.4)	302
5.16 Sound Recording and Reproducing. Speech Instruments (see also 9.6). Supersonic Instruments (see also 10.3)	302
5.17 Telephone. Telephone Receivers	302
5.18 Thermophones (see also 5.9)	None
5.19 Tuning Forks	None
5.20 Tone Synthesizers	302
5.21 Vibration Devices (see also 5.9)	302
6. Musical Instruments and Music	
6.1 General, Unclassified	302
6.2 Bells, Xylophones. Other Instruments Having Rigid Vibrators	303
6.3 Brass Wind Instruments (lip vibrated)	303
6.4 Drums and other Membranophonic Instruments	None
6.5 Pipe Organs	None
6.6 Pianos and other Keyboard Stringed Instruments	None
6.7 Violin Family. Stringed Instruments except Keyboard Type	None
6.8 Wood Winds	303
6.9 Electrical Musical Instruments	303
6.10 Reed Organs. Accordions. Harmonicas	303
7. Noise	
7.1 General, Unclassified (see also 5.15)	303
7.2 Annoyance	None
7.3 Audiograms of Noise	None
7.4 City Noise	None
7.5 Frequency Analyses of Noise	None
7.6 Noise in Buildings (see also 2.2)	303
7.7 Machinery Noise	303
8. Standards	
8.1 General, Unclassified	None
9. Speech and Singing	
9.1 General, Unclassified	303
9.2 Anatomy of Speech Organs	None
9.3 Articulation Testing. Articulation *versus* Loudness, Frequency Range, Noise, Distortion, and Reverberation	303
9.4 Frequency of Occurrence of Speech Sounds	None
9.5 Frequency Analyses of Speech Sounds	304
9.6 Instruments Relating to Speech and Singing	304
9.7 Speech Pitch	None
9.8 Speech Power. Singing Voice Power	None
9.9 Vibrato	None
9.10 Phonetics	304
10. Supersonics (Ultrasonics)	
10.1 General, Unclassified	304
10.2 Light Affected by Supersonic Waves	None
10.3 Supersonic Instruments	304
10.4 Gases, Supersonic Velocities, Dispersion, and Absorption (see also 11.3)	304
10.5 Liquids, Supersonic Velocities, Dispersion, and Absorption (see also 11.9)	304
10.6 Solids, Supersonic Velocities, Dispersion, and Absorption	305
10.7 Physical Effects of Supersonic Waves	None
10.8 Chemical Effects of Supersonic Waves	None
10.9 Biological Effects of Supersonic Waves	None
11. Waves and Vibrations	
11.1 General, Unclassified	305

		Page in this Index
11.2	Diffraction and Interference	None
11.3	Propagation of Sound. Absorption during Propagation. Velocity of Sound (see also 10.4)	305
11.4	Radiation from Vibrating Objects. Acoustical Impedance. Mechanical Impedance (see also 5.3)	305
11.5	Sounds of Finite Amplitude. Distortion	305
11.6	Sound in Tubes	None
11.7	Theory of Waves and Vibrating Systems (see also 5.4)	306
11.8	Biological Effects of Vibration (see also 10.9)	None
11.9	Underwater Sound (see also 10.5, 11.3, and 11.4)	306
12. General, Unclassified		None

Author Index to Volume 18

Numerals in boldface type refer to volume numbers. (A) designates abstracts; (T) designates title only; (L) designates Letter to the Editor.

Arts, Jan. Effect of heating and cooling on the pitch of bells. **18**: 503(L)—1946

Bauer, B. B. Measurement of recording characteristics by means of light patterns. **18**: 387—1946
Benedict, Claire. Standard scale of speech sounds defined in radio. **18**: 249(A)—1946
Beranek, Leo L. Correlation of the audio characteristics of communication systems with measured articulation scores. **18**: 250(A)—1946
—— (see Wallace, R. L., Jr.). **18**: 246(A)—1946
—— **and Harvey P. Sleeper, Jr.** Design and construction of anechoic sound chambers. **18**: 140—1946
—— **and H. P. Sleeper, Jr.** Design of anechoic sound chambers. **18**: 246(A)—1946
Berrien, F. K. and C. W. Young. Effects of acoustical treatment in industrial areas. **18**: 453—1946
Beyer, Robert T. and Myron C. Smith. Ultrasonic absorption in copper acetate and ethyl acetate. **18**: 424—1946
Black, John W. and Harry M. Mason. Training for voice communication. **18**: 441—1946
—— **and Harry Mason.** Training personnel for voice communication. **18**: 250(A)—1946
Blokhintzev, D. Propagation of sound in an inhomogeneous and moving medium I. **18**: 322—1946; II. **18**: 329—1946
Bolt, R. H. Note on normal frequency statistics for rectangular rooms. **18**: 130—1946
Bonn, Theadore H. Ultrasonic condenser microphone. **18**: 496—1946
Butler, John B. and James B. Vernon. Standing wave technique of thickness measurements. **18**: 212—1946

Carlisle, R. W. (see Pearson, H. A.). **18**: 253(A), 348—1946
Carlson, F. D. (see Rudmose, H. W.). **18**: 250(A), 253(A)—1946
Carter, J. L. (see Osborne, M. F. M.). **18**: 252(A)—1946
Christensen, R. J. (see Duvall, G. E.). **18**: 254(A)—1946
Chrzanowski, Peter. Mechanical impedance bridge. **18**: 254(A)—1946
—— (see Cook, Richard K.). **18**: 252(A)—1946
Clark, K. C. (see Rudmose, H. W.). **18**: 250(A), 253(A)—1946
Cohen, E. Richard (see DuMond, Jesse W. M.). **18**: 97—1946
Cook, Richard K. Propagation of sound over absorbent surfaces. **18**: 252(A)—1946
—— **and Peter Chrzanowski.** Absorption of sound by absorbent spheres. **18**: 252(A)—1946
Corey, Victor B. (see Weinbaum, Sidney). **18**: 254(A)—1946
Coxhead, H. B. (see Gilman, G. W.). **18**: 274—1946

Davis, H., C. V. Hudgins, G. E. Peterson, and D. A. Ross. Desirable frequency characteristics for hearing aids. **18**: 247(A)—1946
Deeds, Edward (see DuMond, Jesse W. M.). **18**: 97—1946
Dienel, H. F. (see Wallace, R. L., Jr.). **18**: 246(A)—1946
DiMattia, A. L. and F. M. Wiener. On the absolute pressure calibration of condenser microphones by the reciprocity method. **18**: 341—1946
Drumheller, Carl E., Harold K. Schilling, and Howard A. Thorpe. Correlations between ultrasonic and micrometeorological phenomena. **18**: 246(A)—1946
Dudley, Homer and Otto O. Gruenz, Jr. Translators with external phosphors. **18**: 244(A)—1946
—— **and Otto O. Gruenz, Jr.** Visible speech translators with external phosphors. **18**: 62—1946
DuMond, Jesse W. M., E. Richard Cohen, W. K. H. Panofsky, and Edward Deeds. Determination of the wave forms and laws of propagation and dissipation of ballistic shock waves. **18**: 97—1946
Dunn, H. K. (see Koenig, W.). **18**: 19, 244(A)—1946
Duvall, G. E. and R. J. Christensen. Stratification of sound scatterers in the ocean. **18**: 254(A)—1946

Egan, James P. and Francis M. Wiener. Effects of frequency distortion upon the intelligibility of speech. **18**: 249(A)—1946
—— **and Francis M. Wiener.** On the intelligibility of bands of speech in noise. **18**: 435—1946
Eisenstein, J. C. (see Rudmose, H. W.). **18**: 250(A), 253(A)—1946
Everest, F. A. and H. T. O'Neil. Attenuation of underwater sound. **18**: 255(A)—1946
Eyring, Carl F. Jungle acoustics. **18**: 245(A), 257—1946

Feshbach, H. (see Lax, M.). **18**: 251(A)—1946
Feshbach, Herman (see Harris, Cyril M.). **18**: 246(A)—1946
— **and Cyril M. Harris.** Effect of non-uniform wall distributions of absorbing material on the acoustics of rooms. **18**: 246(A), 472—1946
Firestone, Floyd A. and Julian R. Frederick. Refinements in supersonic reflectroscopy. **18**: 253(A)—1946
— **and Julian R. Frederick.** Refinements in supersonic reflectroscopy. Polarized sound. **18**: 200—1946
Flynn, John (see Newman, E. B.). **18**: 248(A)—1946
Frederick, Julian R. (see Firestone, Floyd A.). **18**: 200, 253(A)—1946
French, N. R. (see Steinberg, J. C.). **18**: 4, 244(A)—1946
Furrer, W. (see Rüedi, L.). **18**: 409—1946

Galt, J. K. and J. R. Pellam. Method of measuring the velocity and absorption of sound in liquids. **18**: 251(A)—1946
Gerjuoy, E. Comments on code for measurement of performance of hearing aids. **18**: 503(L)—1946
Gilman, G. W., H. B. Coxhead, and F. H. Willis. Reflection of sound signals in the trophosphere. **18**: 274—1946
Givens, M. P., W. L. Nyborg, W. H. Pielemeier, and John S. Saby. Ultrasonic propagation in a uniform atmosphere. **18**: 245(A)—1946
—, **W. L. Nyborg, and H. K. Schilling.** Theory of the propagation of sound in scattering and absorbing media. **18**: 284—1946
Green, H. C. (see Kopp, G. A.). **18**: 74, 244(A)—1946
Gruenz, Otto O., Jr. (see Dudley, Homer). **18**: 62, 244(A)—1946
Gwynn, M. H. Incremental musical scales. **18**: 248(A)—1946

Hardy, H. C. and Tyzzer, F. G. Noise and vibration reduction in felt mountings. **18**: 253(A)—1946
Harris, Cyril M. (see Feshbach, Herman). **18**: 246(A), 472—1946
— **and Herman Feshbach.** Acoustics of coupled rooms. **18**: 246(A)—1946
Hart, S. D. (see Osborne, M. F. M.). **18**: 170, 251(A)—1946
Hudgins, C. V. (see Davis, H.). **18**: 247(A)—1946

Jones, Arthur Taber. Just scale for music. **18**: 167—1946
— References to contemporary papers on acoustics. **18**: 229, 507—1946
Jones, R. Clark. Fifty horsepower siren. **18**: 371—1946

Knauert, W. F. (see Pearson, H. A.). **18**: 253(A), 348—1946
Knudsen, Vern O. Attenuation of sound in fogs and clouds. **18**: 245(A)—1946
— Propagation of sound in the atmosphere—Attenuation and fluctuations. **18**: 90—1946
Koenig, W., H. K. Dunn, and L. Y. Lacy. Sound spectrograph. **18**: 19, 244(A)—1946
Kopp, G. A. and H. C. Green. Basic phonetic principles of visible speech. **18**: 74, 244(A)—1946
Kosten, C. W. Absorption of sound by coated porous rubber wall-covering layers. **18**: 457—1946
Kryster, K. D. Effect of plugging the ears on the intelligibility of speech in noise. **18**: 249(A)—1946
— Effects of ear protective devices on the intelligibility of speech in noise. **18**: 413—1946

Lacy, L. Y. (see Koenig, W.). **18**: 19, 244(A)—1946
Lax, M. and H. Feshbach. High frequency radiation from a cylinder of arbitrary cross sections. **18**: 251(A)—1946
Leonard, R. W. Attenuation of sound waves in water by a reverberation method. **18**: 252(A)—1946
Licklider, J. C. R. Effects of amplitude distortion upon the intelligibility of speech. **18**: 249(A), 429—1946
London, Albert. Theory of the transmission of reverberant sound through double partitions. **18**: 252(A)—1946
Lovell, G. A. (see Wente, E. C.). **18**: 253(A)—1946
Loye, Donald P. and Don P. Proudfoot. Underwater noises due to marine-life. **18**: 247(A), 446—1946

Maa, Dah-You. Fluctuation phenomena in room acoustics. **18**: 134—1946
Marquis, R. J. (see Wiener, Francis M.). **18**: 450—1946
Martin, Daniel W. Magnetic throat microphones of high sensitivity. **18**: 253(A)—1946
Masket, A. Victor. On the vibrations of a whirling wire. **18**: 216(L)—1946
Mason, Harry. (see Black, John W.). **18**: 250(A), 441—1946
Massa, Frank. Book review. **18**: 229—1946
McMillan, Edwin M. Violation of the reciprocity theorem in linear passive electromechanical systems. **18**: 344—1946
McMillen, J. Howard. Velocity of dilation and Rayleigh waves in metal bars. **18**: 190—1946
Meeker, Willard F. (see Slaymaker, Frank H.). **18**: 251(A), 355—1946
Merrill, Lynn L. (see Slaymaker, Frank H.). **18**: 251(A), 355—1946
Miller, G. A. and S. Mitchell. Effects of distortion on the intelligibility of speech at high altitudes. **18**: 250(A)—1946
Miller, Joseph (see Stevens, S. S.). **18**: 250(A), 418—1946
Mitchell, S. (see Miller, G. A.). **18**: 250(A)—1946
Mongan, C. E., Jr. Echo formation on simple surfaces. **18**: 255(A)—1946
Morse, Milton. Embossed recording. **18**: 254(A)—1946
Muller, J. F. (see Wente, E. C.). **18**: 253(A)—1946
Mundel, A. B. (see Pearson, H. A.). **18**: 253(A), 348—1946

Newman, E. B. and John Flynn. Auditory factors in radio range reception. **18**: 248(A)—1946
Nichols, R. H., Jr. Effects of conditions of use upon performance of hearing aids. **18**: 247(A)—1946
Nichols, Rudolph H., Jr. Effects of finite baffles on response of source with back enclosed. **18**: 151—1946
Nyborg, W. L. (see Givens, M. P.). **18**: 245(A), 284—1946
Nyborg, Wesley L. (see Saby, John S.). **18**: 316—1946

O'Neil, H. T. (see Everest, F. A.). **18**: 255(A)—1946
Osborne, M. F. M. and J. L. Carter. Transient analysis of linear systems, using underwater explosion waves. **18**: 252(A)—1946

—— **and S. D. Hart.** Transmission, reflection, and guiding of an exponential pulse by a steel plate in water. II. Experiment. **18**: 170, 251(A)—1946

Panofsky, W. K. H. (see DuMond, Jesse W. M.). **18**: 97—1946

Pearson, H. A., A. B. Mundel, R. W. Carlisle, Wm. Knauert, and M. Zaret. Development of midget earphones for military use. **18**: 253(A), 348—1946

Pekeris, C. L. Theory of propagation of sound in a half-space of variable sound velocity under conditions of formation of a shadow zone. **18**: 295—1946

Pellam, J. R. (see Galt, J. K.). **18**: 251(A)—1946

Peterson, G. E. (see Davis, H.). **18**: 247(A)—1946

Pielemeier, W. H. Low impedance ear shields for explosive pulses. **18**: 248(A)—1946

—— (see Givens, M. P.). **18**: 245(A)—1946

Potter, Ralph K. Introduction to technical discussions of sound portrayal. **18**: 1—1946

—— Visible sound. **18**: 249(A)—1946

Proudfoot, Don A. (see Loye, Donald P.). **18**: 247(A), 446—1946

Quinn, Brother John. Absorption of ultrasonic waves in benzene. **18**: 185—1946

Riesz, R. R. and L. Schott. Cathode-ray translator. **18**: 244(A)—1946

—— **and L. Schott.** Visible speech cathode-ray translator. **18**: 50—1946

Ross, D. A. (see Davis, H.). **18**: 247(A)—1946

—— (see Wiener, Francis, M.). **18**: 248(A), 401—1946

Rudmose, H. W., K. C. Clark, F. D. Carlson, J. C. Eisenstein, and R. A. Walker. Effects of high altitude on speech and hearing. **18**: 250(A)—1946

——, **K. C. Clark, F. D. Carlson, J. C. Eisenstein, and R. A. Walker.** Integrating audiospectrometer. **18**: 253(A)—1946

Rudnick, Isadore. Propagation of an acoustic wave along an absorbing boundary. **18**: 245(A)—1946

Rüedi, L. and W. Furrer. Physics and physiology of acoustic trauma. **18**: 409—1946

Saby, John S. (see Givens, M. P.). **18**: 245(A)—1946

—— **and Wesley L. Nyborg.** Ray computation for non-uniform fields. **18**: 316—1946

—— **and Howard A. Thorpe.** Ultrasonic ambient noise in tropical jungles. **18**: 271—1946.

Saunders, F. A. Analysis of the tones of a few wind instruments. **18**: 395—1946

Schafer, T. H. Discrimination of transducers against reverberation. **18**: 254(A)—1946

Schamberg, Richard. (see Tsien, Hsue-shen). **18**: 334—1946

Schilling, H. K. (see Givens, M. P.). **18**: 284—1946

—— (see Drumheller, Carl E.). **18**: 246(A)—1946

Schott, L. (see Riesz, R. R.). **18**: 50, 244(A)—1946

Sepmeyer, L. W. Curvature meter for use in disk recording. **18**: 255(A)—1946

Sheehy, M. J. Transmission of high-frequency sound well beneath the ocean surface. **18**: 255(A)—1946

Slaymaker, Frank H., Willard F. Meeker, and Lynn L. Merrill. Directional characteristics of a free-edge disk mounted in a flat baffle or in a parabolic horn. **18**: 251(A), 355—1946

Sleeper, Harvey P., Jr. (see Beranek, Leo L.). **18**: 140, 246(A)—1946

Smith, Myron C. (see Beyer, Robert T.). **18**: 424—1946

Steinberg, J. C. and N. R. French. Portrayal of visible speech. **18**: 4, 244(A)—1946

Stevens, S. S., Joseph Miller, and Ida Truscott. Masking of speech by sine waves, square waves, and regular and modulated pulses. **18**: 418—1946

——, **Joseph Miller, and Ida Truscott.** Masking of speech by sine waves, square waves, and regular and randomized pulses. **18**: 250(A)—1946

Teeter, Charles Edwin, Jr. Absorption of supersonic waves in liquids. **18**: 488—1946

Thorpe, Howard A. (see Drumheller, Carl E.). **18**: 246(A)—1946

—— (see Saby, John S.). **18**: 271—1946

Truscott, Ida. (see Stevens, S.S.). **18**: 250(A), 418—1946

Tsien, Hsue-shen and Richard Schamberg. Propagation of plane sound waves in rarefied gases. **18**: 334—1946

Tyzzer, F. G. (see Hardy, H. C.). **18**: 253(A)—1946

Vernen, James B. (see Butler, John B.). **18**: 212—1946

Walker, R. A. (see Rudmose, H. W.). **18**: 250(A), 253(A)—1946

Wallace, R. L., Jr., H. F. Dienel, and Leo L. Beranek. Measurement of the transmission of sound through lightweight structures. **18**: 246(A)—1946

Watson, Robert B. Modulation of sound decay curves. **18**: 119—1946

Weichbrod, J. Problems of high altitude communication. **18**: 161, 250(A)—1946

Weinbaum, Sidney and Victor B. Corey. New method of measuring Mach number and true air speed of high velocity aircraft. **18**: 254(A)—1946

Wente, E. C., C. A. Lovell, and J. F. Muller. Hundred-element tone synthesizer. **18**: 253(A)—1946

White, J. E. Motional impedance analysis applied to a dynamic microphone. **18**: 155, 253(A)—1946

Wiener, F. M. (see DiMattia, A. L.). **18**: 341—1946

Wiener, Francis M. (see Egan, James P.). **18**: 249(A), 435—1946

—— **and R. J. Marquis.** Noise levels due to an airplane passing overhead. **18**: 450—1946

—— **and Douglas A. Ross.** Pressure distribution in the auditory canal in a progressive sound field. **18**: 248(A), 401—1946

Willis, F. H. (see Gilman, G. W.). **18**: 274—1946

Young, C. W. (see Berrien, F. K.). **18**: 453—1946

Young, Robert W. Review of acoustical patents. **18**: 235, 512—1946

—— Types of underwater sound transmission. **18**: 255(A)—1946

Zaret, M. (see Pearson, H. A.). **18**: 253(A), 348—1946

Analytic Subject Index to Volume 18

Numerals in bold type refer to volume numbers.

1. Acoustical Society of America

1.1 General, Unclassified

Cash for certain back numbers of the journal. **18**: 506—1946

Defense Research Laboratory at The University of Texas. **18**: 223—1946

Invitation to submit acoustical papers of naval interest. **18**: 220, 506—1946

Report on reorganization of the American Institute of Physics. **18**: 223—1946

1.2 Constitution and By-Laws

Report on membership reorganization of the Acoustical Society. **18**: 224—1946

1.5 Meetings

Fall meeting of the Acoustical Society in Chicago. **18**: 504—1946

Thirty-first meeting of the Acoustical Society. **18**: 217—1946

1.6 Members and Membership Lists

Biennial award given to Dr. Vincent Salmon. **18**: 217—1946

C. F. Wiebusch receives medal for merit. **18**: 504—1946

Colonel George C. Crom, Jr. **18**: 221—1946

Dr. Edward B. Stephenson, Office of Research and Inventions, Navy Department, receives Meritorious Civilian Award. **18**: 505—1946

Dr. Franz N. D. Kurie. **18**: 221—1946

Dr. Leo L. Beranek receives honorary degree of Doctor of Science. **18**: 219—1946

Dr. S. S. Stevens elected to membership in the National Academy of Sciences. **18**: 219—1946

J. Milton Cowan. **18**: 505—1946

John D. Kraus. **18**: 220—1946

Mr. Prescott N. Arnold, Office of Research and Inventions, Navy Department, receives meritorious award. **18**: 505—1946

New members. **18**: 226, 506—1946

News of Dr. Erwin Meyer and Akustische Zeitschrift. **18**: 221—1946

Posthumous award to A. L. Thuras. **18**: 506—1946

Retirement of Professor Arthur T. Jones. **18**: 220—1946

Secretary Wallace Waterfall to return to Chicago. **18**: 220—1946

Timothy E. Shea receives medal for merit. **18**: 504—1946

Would you like to donate your back numbers of our journal to a devastated library? **18**: 222—1946

1.7 Letters to the Editor

Comments on code for measurement of performance of hearing aids. E. Gerjuoy. **18**: 503—1946

Effect of heating and cooling on the pitch of bells. Jan Arts. **18**: 503—1946

On the vibrations of a whirling wire. A. Victor Masket. **18**: 216—1946

2. Architectural Acoustics

2.3 Studies of Existing Auditoria

SUBTITLE

Decay constants, reverberation time, and maximum modulation amplitude for ten different rooms. **18**: 127—1946

2.4 Sound Absorption, Theory and Methods of Measurement of (see also 2.5)

PAPERS

Absorption of sound by coated porous rubber wallcovering layers. C. W. Kosten. **18**: 457—1946

Design and construction of anechoic sound chambers. Leo L. Beranek and Harvey P. Sleeper, Jr. **18**: 140—1946

Effect of non-uniform wall distributions of absorbing material on the acoustics of rooms. Herman Feshbach and Cyril M. Harris. **18**: 472—1946

ABSTRACTS

Absorption of sound by absorbent spheres. Richard K. Cook and Peter Chrzanowski. **18**: 252—1946

Design of anechoic sound chambers. Leo L. Beranek and H. P. Sleeper, Jr. **18**: 246—1946

Effect of non-uniform wall distributions of absorbing material on the acoustics of rooms. Herman Feshbach and Cyril M. Harris. **18**: 246—1946

PATENT

Acoustical structure. **18**: 512—1946

2.6 Noise Reduction by Increased Room Absorption

PAPERS

Design and construction of anechoic sound chambers. Leo L. Beranek and Harvey P. Sleeper, Jr. **18**: 140—1946

Effects of acoustical treatment in industrial areas. F. K. Berrien and C. W. Young. **18**: 453—1946

ABSTRACT

Design of anechoic sound chambers. Leo L. Beranek and H. P. Sleeper, Jr. **18**: 246—1946

2.7 Reverberation, Theory and Calculation of (see also 2.3, 2.4, 2.8, 2.9, and 2.10)

PAPERS

Fluctuation phenomena in room acoustics. Dah-You Maa. **18**: 134—1946

Modulation of sound decay curves. Robert B. Watson. **18**: 119—1946

Note on normal frequency statistics for rectangular rooms. R. H. Bolt. **18**: 130—1946

ABSTRACTS
Acoustics of coupled rooms. Cyril M. Harris and Herman Feshbach. **18**: 246—1946
Discrimination of transducers against reverberation. T. H. Schafer. **18**: 254—1946

2.9 Sound Transmission, Theory and Methods of Measurement of

ABSTRACT
Theory of the transmission of reverberant sound through double partitions. Albert London. **18**: 252—1946
PATENTS
Sound arrester in the ventilator of sound-arresting rooms. **18**: 513—1946
Sound insulation for fluid conduits. **18**: 512—1946

2.10 Measurements of Sound Transmission

ABSTRACT
Measurement of the transmission of sound through lightweight structures. R. L. Wallace, Jr. H. F. Dienel, and Leo L. Beranek. **18**: 246—1946

2.11 Vibration Insulating Supports

ABSTRACT
Noise and vibration reduction in felt mountings. H. C. Hardy and F. G. Tyzzer. **18**: 253—1946
PATENT
Vibration absorption support. **18**: 513—1946

2.12 Damping of Panels

PATENT
Sound deadener. **18**: 513—1946

3. Books and Bibliographies

3.1 Book Reviews

Design of crystal vibrating systems. William J. Fry, John M. Taylor and Bertha W. Henvis. **18**: 229—1946
Der Ultraschall und Seine Anwendung in Wissenschaft und Technik. Ludwig Bergmann. **18**: 507—1946

3.2 Bibliographies

References to contemporary papers on acoustics. **18**: 229, 507—1946
Information relative to declassified OSRD reports and technical work in enemy countries. **18**: 221—1946
Reports issued by the Electro-Acoustic Laboratory during World War II and now declassified. **18**: 222—1946

3.3 Patents

ABSTRACTS
Review of acoustical patents. Robert W. Young. **18**: 235, 512—1946

4. Ear and Hearing

4.1 General, Unclassified

PAPER
Pressure distribution in the auditory canal in a progressive sound field. Francis M. Wiener and Douglas A. Ross. **18**: 401—1946
ABSTRACTS
Auditory factors in radio range reception. E. B. Newman and John Flynn. **18**: 248—1946
Effects of high altitude on speech and hearing. H. W. Rudmose, K. C. Clark, F. D. Carlson, J. C. Eisenstein, and R. A. Walker. **18**: 250—1946
Pressure distribution in the auditory canal in a progressive sound field. Francis M. Wiener and Douglas A. Ross. **18**: 248—1946

4.3 Binaural Hearing. Localization

SUBTITLE
Directionality of ultrasonic sound in the jungle. **18**: 293—1946

4.4 Deafness (see also 5.5)

PAPER
Physics and physiology of acoustic trauma. L. Rüedi and W. Furrer. **18**: 409—1946

4.5 Instruments Relating to Hearing (see also 5.5)

PAPERS
Effects of ear protective devices on the intelligibility of speech in noise. K. D. Kryter. **18**: 413—1946
Physics and physiology of acoustic trauma. L. Rüedi and W. Furrer. **18**: 409—1946
ABSTRACTS
Desirable frequency characteristics for hearing aids. H. Davis, C. V. Hudgins, G. E. Peterson, and D. A. Ross. **18**: 247—1946
Effect of plugging the ears on the intelligibility of speech in noise. K. D. Kryter. **18**: 249—1946
Effects of conditions of use upon performance of hearing aids. R. H. Nichols, Jr. **18**: 247—1946
Low impedance ear shields for explosive pulses. W. H. Pielemeier. **18**: 248—1946
SUBTITLE
Comments on code for measurement of performance of hearing aids. E. Gerjuoy. **18**: 503—1946 L.E.
Ear defenders. **18**: 412—1946
PATENTS
Applicator for ear protectors. **18**: 235—1946
Fitting hearing aid device. **18**: 235—1946
Hearing aid. **18**: 235—1946
Hearing aid device. **18**: 513—1946
Tone control. **18**: 235—1946

4.6 Loudness. Threshold Determinations

PAPER
Pressure distribution in the auditory canal in a progressive sound field. Francis M. Wiener and Douglas A. Ross. **18**: 401—1946
ABSTRACT
Pressure distribution in the auditory canal in a progressive field. Francis M. Wiener and Douglas A. Ross. **18**: 248—1946

4.7 Masking (see also 5.5)

PAPER

Masking of speech by sine waves, square waves, and regular and modulated pulses. S. S. Stevens, Joseph Miller, and Ida Truscott. **18**: 418—1946

ABSTRACT

Masking of speech by sine waves, square waves, and regular and randomized pulses. S. S. Stevens, Joseph Miller, and Ida Truscott. **18**: 250—1946

5. Applied Acoustics. Instruments and Apparatus

5.1 General, Unclassified

PAPER

Fifty horsepower siren. R. Clark Jones. **18**: 371—1946

ABSTRACT

New method of measuring Mach number and true air speed of high velocity aircraft. Disney Weinboum and Victor B. Corey. **18**: 254—1946

PATENT

Electroacoustic binaural listening system. **18**: 513—1946

5.3 Acoustical and Mechanical Impedance Measurement (see also 11.4)

ABSTRACT

Mechanical impedance bridge. Peter Chrzanowski. **18**: 254—1946

5.4 Analyzers and Filters. Acoustic Filters. Oscillographs (see also 5.15)

PAPERS

Introduction to technical discussions of sound portrayal. Ralph K. Potter. **18**: 1—1946

Portrayal of visible speech. J. C. Steinberg and N. R. French. **18**: 4—1946

Sound spectrograph. W. Koenig, H. K. Dunn, and L. Y. Lacy. **18**: 19—1946

Visible speech cathode-ray translator. R. R. Riesz and L. Schott. **18**: 50—1946

Visible speech translators with external phosphors. Homer Dudley and Otto O. Gruenz, Jr. **18**: 62—1946

ABSTRACTS

Cathode-ray translator. R. R. Riesz and L. Schott. **18**: 244—1946

Integrating audiospectrometer. H. W. Rudmose, K. C. Clark, F. D. Carlson, J. C. Eisenstein, and R. A. Walker. **18**: 253—1946

Portrayal of visible speech. J. C. Steinberg and N. R. French. **18**: 244—1946

Sound spectrograph. W. Koenig, H. K. Dunn, and L. Y. Lacy. **18**: 244—1946

Translators with external phosphors. Homer Dudley and Otto O. Gruenz, Jr. **18**: 244—1946

5.51 Broadcasting.

PAPERS

Problems of high altitude communication. J. Weichbrod. **18**: 161—1946

Training for voice communication. John W. Black and Harry M. Mason. **18**: 441—1946

5.8 Loudspeakers. Horns (see also 5.13 and 5.17)

PAPERS

Directional characteristics of a free-edge disk mounted in a flat baffle or in a parabolic horn. Frank H. Slaymaker, Willard F. Meeker, and Lynn L. Merrill. **18**: 355—1946

Fifty horsepower siren. R. Clark Jones. **18**: 371—1946

ABSTRACTS

Directional characteristics of a free-edge disk mounted in a flat baffle or in a parabolic horn. Frank H. Slaymaker, Willard F. Meeker, and Lynn L. Merrill. **18**: 251—1946

Discrimination of transducers against reverberation. T. H. Schafer. **18**: 254—1946

SUBTITLE

Design of crystal vibrating systems. William J. Fry, John M. Taylor, and Bertha W. Henvis. **18**: 229—1946 B.R.

PATENTS

Communication system. **18**: 236—1946

Horn loudspeaker. **18**: 514—1946

Method of and apparatus for making fibrous articles. **18**: 236—1946

Sound reproducing and amplifying device. **18**: 236—1946

Sound translating apparatus. **18**: 237—1946

5.9 Microphones. Vibration Microphones. Microphone Calibration Equipment

PAPERS

Design and construction of anechoic sound chambers. Leo L. Beranek and Harvey P. Sleeper, Jr. **18**: 140—1946

Motional impedance analysis applied to a dynamic microphone. J. E. White. **18**: 155—1946

On the absolute pressure calibration of condenser microphones by the reciprocity method. A. L. DiMattia and F. M. Wiener. **18**: 341—1946

Ultrasonic condenser microphone. Theodore H. Bonn. **18**: 496—1946

Violation of the reciprocity theorem in linear passive electromechanical systems. Edwin M. McMillan. **18**: 344—1946

ABSTRACTS

Design of anechoic sound chambers. Leo L. Beranek and H. P. Sleeper, Jr. **18**: 246—1946

Discrimination of transducers against reverberation. T. H. Schafer. **18**: 254—1946

Magnetic throat microphones of high sensitivity. Daniel W. Martin. **18**: 253—1946

Motional impedance analysis applied to a dynamic microphone. J. E. White. **18**: 253—1946

Transient analysis of linear systems, using underwater explosion waves. M. F. M. Osborne and J. L. Carter. **18**: 252—1946

SUBTITLE

Design of crystal vibrating systems. William J. Fry, John M. Taylor, and Bertha W. Henvis, **18**: 229—1946 B.R.

PATENTS

Distant talking loudspeaker telephone system. **18**: 237—1946

Electroacoustic transducer. **18**: 237—1946
Microphonic electron tube. **18**: 514—1946
Noise shield for acoustic devices. **18**: 514—1946
Piezoelectric transducer. **18**: 514—1946

5.10 Navigational Instruments. Depth and Altitude Measuring Instruments. Geophysical Prospecting. Underwater Sound. Submarine Detectors

PATENTS
Amplification control in seismic surveying. **18**: 237—1946
Amplifying apparatus. **18**: 238—1946
Automatically operated object-locating system. **18**: 515—1946
Directional seismograph pick-up. **18**: 240—1946
Geological prospecting system. **18**: 239—1946
Interval meter. **18**: 515—1946
Interval meter and indicator therefor. **18**: 515, 516—1946
Method of seismic surveying. **18**: 239—1946
Seismic detector system. **18**: 238—1946
Seismic surveying. **18**: 238, 240—1946
Seismograph. **18**: 238—1946
Signal translating apparatus. **18**: 515—1946
Submarine signaling apparatus. **18**: 239—1946
System for geological exploration by elastic waves. **18**: 239—1946

5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement (see also 5.4)

PAPERS
Introduction to technical discussions of sound portrayal. Ralph K. Potter. **18**: 1—1946
Portrayal of visible speech. J. C. Steinberg and N. R. French. **18**: 4—1946
Sound spectrograph. W. Koenig, H. K. Dunn, and L. Y. Lacy. **18**: 19—1946
Visible speech cathode-ray translator. R. R. Riesz and L. Schott. **18**: 50—1946
Visible speech translators with external phosphors. Homer Dudley and Otto O. Gruenz, Jr. **18**: 62—1946

ABSTRACTS
Cathode-ray translator. R. R. Riesz and L. Schott. **18**: 244—1946
Portrayal of visible speech. J. C. Steinberg and N. R. French. **18**: 244—1946
Sound spectrograph. W. Koenig, H. K. Dunn, and L. Y. Lacy. **18**: 244—1946
Translators with external phosphors. Homer Dudley and Otto O. Gruenz, Jr. **18**: 244—1946

5.16 Sound Recording and Reproducing. Speech Instruments (see also 9.6). Supersonic Instruments (see also 10.3)

PAPER
Measurement of recording characteristics by means of light patterns. B. B. Bauer. **18**: 387—1946

ABSTRACTS
Curvature meter for use in disk recording. L. W. Sepmeyer. **18**: 255—1946
Embossed recording. Milton Morse. **18**: 254—1946

PATENTS
Design for a phonograph pick-up arm. **18**: 240—1946
Dual speed phonograph. **18**: 241—1946
Electromagnetic sound recorder and reproducer. **18**: 517—1946
Means for resilient mounting of units. **18**: 241—1946
Phonograph pick-up. **18**: 241—1946
Phonograph stylus. **18**: 517—1946
Push-pull sound reproducing method and system. **18**: 516—1946
Recording and reproducing device. **18**: 240—1946
Recording-reproducing device. **18**: 240—1946
Reproduction of sound. **18**: 241—1946
Signal translating apparatus. **18**: 516—1946
Stylus device. **18**: 517—1946

5.17 Telephone. Telephone Receivers

PAPERS
Development of midget earphones for military use. H. A. Pearson, A. B. Mundel, R. W. Carlisle, W. F. Knauert, and M. E. Zaret. **18**: 348—1946
Training for voice communication. John W. Black and Harry M. Mason. **18**: 441—1946

ABSTRACT
Development of midget earphones for military use. H. A. Pearson, A. B. Mundel, R. W. Carlisle, W. Knauert and M. Zaret. **18**: 253—1946

PATENTS
Intercommunication system. **18**: 242—1946
Sound translating device. **18**: 241—1946

5.20 Tone Synthesizers

ABSTRACT
Hundred-element tone synthesizer. E. C. Wente, C. A. Lovell, and J. F. Muller. **18**: 253—1946

5.21 Vibration Devices (see also 5.9)

PATENTS
Antiflutter and vibration device for fan and propeller blades. **18**: 518—1946
Centrifugal pendulum. **18**: 242—1946
Fin vibration damping means. **18**: 518—1946
Means for detecting and measuring torsional vibrations. **18**: 518—1946
Milling machine vibration damper. **18**: 243—1946
Mounting. **18**: 242—1946
Oscillation reducing device. **18**: 517—1946
Resilient unit for operation in tension. **18**: 243—1946
Vibration damper. **18**: 242, 517—1946
Vibration isolator. **18**: 242—1946

6. Musical Instruments and Music

6.1 General, Unclassified

PAPERS
Analyses of the tones of a few wind instruments. F. A. Saunders. **18**: 395—1946
Just scale for music. Arthur Taber Jones. **18**: 167—1946

ABSTRACT
Incremental musical scales. M. H. Gwynn. **18**: 248—1946

PATENT
Tuning apparatus for musical instruments. **18:** 518—1946

6.2 Bells, Xylophones, Other Instruments Having Rigid Vibrators

SUBTITLE
Effect of heating and cooling on the pitch of bells. Jan Arts. **18:** 503—1946 L.E.

6.3 Brass Wind Instruments (lip vibrated)

PAPER
Analyses of the tones of a few wind instruments. F. A. Saunders. **18:** 395—1946

6.8 Wood Winds

PAPER
Analyses of the tones of a few wind instruments. F. A. Saunders. **18:** 395—1946

PATENTS
Mouthpiece for musical instruments. **18:** 519—1946
Resonator for musical instruments. **18:** 519—1946
Valve key assembly. **18:** 518—1946

6.9 Electrical Musical Instruments

PATENT
Electronic musical instrument. **18:** 519—1946

6.10 Reed Organs. Accordions. Harmonicas.

PATENT
Multiple magnetic valve for organs. **18:** 519—1946

7. Noise

7.1 General, Unclassified (see also 5.15)

PAPERS
Noise levels due to an airplane passing overhead. Francis M. Wiener and R. J. Marquis. **18:** 450—1946
Ultrasonic ambient noise in tropical jungles. John S. Saby and Howard A. Thorpe. **18:** 271—1946
Underwater noise due to marine life. Donald P. Loye and Don A. Proudfoot. **18:** 446—1946

ABSTRACT
Underwater noises due to marine life. Donald P. Loye and Don A. Proudfoot. **18:** 247—1946

7.6 Noise in Buildings (see also 2.2)

PAPER
Effects of acoustical treatment in industrial areas. F. K. Berrien and C. W. Young. **18:** 453—1946

7.7 Machinery Noise

PAPER
Noise levels due to an airplane passing overhead. Francis M. Wiener and R. J. Marquis. **18:** 450—1946

PATENTS
Engine exhaust muffler. **18:** 243—1946
Exhaust silencer. **18:** 520—1946
Muffler. **18:** 243, 520—1946
Silencer for internal-combustion engines. **18:** 243—1946

9. Speech and Singing

9.1 General, Unclassified

PAPERS
Basic phonetic principles of visible speech. G. A. Kopp and H. C. Green. **18:** 74—1946
Masking of speech by sine waves, square waves, and regular and modulated pulses. S. S. Stevens, Joseph Miller, and Ida Truscott. **18:** 418—1946.
Problems of high altitude communication. J. Weichbrod. **18:** 161—1946
Training for voice communication. John W. Black and Harry M. Mason. **18:** 441—1946

ABSTRACTS
Basic phonetic principles of visible speech. G. A. Kopp and H. C. Green. **18:** 244—1946
Effects of high altitude on speech and hearing. H. W. Rudmose, K. C. Clark, F. D. Carlson, J. C. Eisenstein, and R. A. Walker. **18:** 250—1946
Problems of high altitude communication. J. Weichbrod. **18:** 250—1946
Training personnel for voice communication. John W. Black and Harry Mason. **18:** 250—1946

SUBTITLE
Characteristics of speech. **18:** 5—1946

9.3 Articulation Testing. Articulation *versus* Loudness, Frequency Range, Noise, Distortion, and Reverberation

PAPERS
Effects of amplitude distortion upon the intelligibility of speech. J. C. R. Licklider. **18:** 429—1946
Effects of ear protective devices on the intelligibility of speech in noise. K. D. Kryter. **18:** 413—1946
On the intelligibility of bands of speech in noise. James P. Egan and Francis M. Wiener. **18:** 435—1946
Training for voice communication. John W. Black and Harry M. Mason. **18:** 441—1946

ABSTRACTS
Correlation of the audio characteristics of communication systems with measured articulation scores. Leo L. Beranek. **18:** 250—1946
Effect of plugging the ears on the intelligibility of speech in noise. K. D. Kryter. **18:** 249—1946
Effects of amplitude distortion upon the intelligibility of speech. J. C. R. Licklider. **18:** 249—1946
Effects of distortion on the intelligibility of speech at high altitudes. G. A. Miller and S. Mitchell. **18:** 250—1946
Effects of frequency distortion upon the intelligibility of speech. James P. Egan and Francis M. Wiener. **18:** 249—1946
Masking of speech by sine waves, square waves, and regular and randomized pulses. S. S. Stevens, Joseph Miller, and Ida Truscott. **18:** 250—1946

SUBTITLE
Cumulative increase of articulation index as frequency range increases. **18:** 10—1946

9.5 Frequency Analyses of Speech Sounds

PAPERS

Basic phonetic principles of visible speech. G. A. Kopp and H. C. Green. **18**: 74—1946

Introduction to technical discussions of sound protrayal. Ralph K. Potter. **18**: 1—1946

Portrayal of visible speech. J. C. Steinberg and N. R. French. **18**: 4—1946

Sound spectrograph. W. Koenig, H. K. Dunn, and L. Y. Lacy. **18**: 19—1946

Visible speech cathode-ray translator. R. R. Riesz and L. Schott. **18**: 50—1946

Visible speech translators with external phosphors. Homer Dudley and Otto O. Gruenz, Jr. **18**: 62—1946

ABSTRACTS

Basic phonetic principles of visible speech. G. A. Kopp and H. C. Green. **18**: 244—1946

Cathode-ray translator. R. R. Riesz and L. Schott. **18**: 244—1946.

Portrayal of visible speech. J. C. Steinberg and N. R. French. **18**: 244—1946

Sound spectrograph. W. Koenig, H. K. Dunn, and L. Y. Lacy. **18**: 244—1946

Translators with external phosphors. Homer Dudley and Otto O. Gruenz, Jr. **18**: 244—1946

SUBTITLES

Analyses of bird songs. **18**: 45—1946

Analyses of some animal sounds. **18**: 47—1946

Method of illustrating the energy-frequency-time distribution in speech. **18**: 22—1946

Method to show how vocal resonances change with time. **18**: 19—1946

Spectrograms of speech. **18**: 30—1946

Time variations of vocal resonances in a short sentence. **18**: 20—1946

9.6 Instruments Relating to Speech and Singing

PAPERS

Basic phonetic principles of visible speech. G. A. Kopp and H. C. Green. **18**: 74—1946

Introduction to technical discussions of sound protrayal. Ralph K. Potter. **18**: 1—1946

Portrayal of visible speech. J. C. Steinberg and N. R. French. **18**: 4—1946

Sound spectrograph. W. Koenig, H. K. Dunn, and L. Y. Lacy. **18**: 19—1946

Visible speech cathode-ray translator. R. R. Riesz and L. Schott. **18**: 50—1946

Visible speech translators with external phosphors. Homer Dudley and Otto O. Gruenz, Jr. **18**: 62—1946

ABSTRACTS

Basic phonetic principles of visible speech. G. A. Kopp and H. C. Green. **18**: 244—1946

Cathode-ray translator. R. R. Riesz and L. Schott. **18**: 244—1946

Portrayal of visible speech. J. C. Steinberg and N. R. French. **18**: 244—1946

Sound spectrograph. W. Koenig, H. K. Dunn, and L. Y. Lacy. **18**: 244—1946

Translators with external phosphors. Homer Dudley and Otto O. Gruenz, Jr. **18**: 244—1946

Visible sound. Ralph K. Potter. **18**: 249—1946

9.10 Phonetics

PAPER

Basic phonetic principles of visible speech. G. A. Kopp and H. C. Green. **18**: 74—1946

ABSTRACTS

Basic phonetic principles of visible speech. G. A. Kopp and H. C. Green. **18**: 244—1946

Standard scale of speech sounds defined in radio. Claire Benedict. **18**: 249—1946

SUBTITLE

Classification and differentiation of speech sounds. **18**: 79—1946

10. Supersonics (Ultrasonics)

10.1 General, Unclassified

SUBTITLE

Der Ultraschall und Seine Anwendung in Wissenschaft und Technik, Ludwig Bergmann, **18**: 507—1946 B.R.

10.3 Supersonic Instruments

PAPERS

Refinements in supersonic reflectoscopy. Polarized sound. Floyd A. Firestone and Julian R. Frederick. **18**: 200—1946

Standing wave technique of thickness measurements. John B. Butler and James B. Vernon. **18**: 212—1946

Ultrasonic condenser microphone. Theodore H. Bonn. **18**: 496—1946

ABSTRACT

Refinements in supersonic reflectoscopy. Floyd A. Firestone and Julian R. Frederick. **18**: 253—1946

10.4 Gases, Supersonic Velocities, Dispersion, and Absorption (see also 11.3)

ABSTRACT

Correlations between ultrasonic and micrometeorological phenomena. Carl E. Drumheller, Harold K. Schilling, and Howard A. Thorpe. **18**: 246—1946

10.5 Liquids, Supersonic Velocities, Dispersion, and Absorption (see also 11.9)

PAPERS

Absorption of supersonic waves in liquids. Charles Edwin Teeter, Jr. **18**: 488—1946

Absorption of ultrasonic waves in benzene. Brother John Quinn. **18**: 185—1946

Ultrasonic absorption in copper acetate and ethyl acetate. Robert T. Beyer and Myron C. Smith. **18**: 424—1946

ABSTRACTS

Attenuation of sound waves in water by a reverberation method. R. W. Leonard. **18**: 252—1946

Attenuation of underwater sound. F. A. Everest and H. T. O'Neil. **18**: 255—1946

Method of measuring the velocity and absorption of sound in liquids. J. K. Galt and J. R. Pellam. **18**: 251—1946

Transmission of high frequency sound well beneath the ocean surface. M. J. Sheehy. **18**: 255—1946

SUBTITLE

Absorption of supersonic waves in water. **18**: 489—1946

10.6 Solids, Supersonic Velocities, Dispersion, and Absorption

PAPERS

Standing wave technique of thickness measurements. John B. Butler and James B. Vernon. **18**: 212—1946

Refinements in supersonic reflectoscopy. Polarized sound. Floyd A. Firestone and Julian R. Frederick. **18**: 200—1946

Velocity of dilatation and Rayleigh waves in metal bars. J. Howard McMillen. **18**: 190—1946

ABSTRACT

Refinements in supersonic reflectoscopy. Floyd A. Firestone and Julian R. Frederick. **18**: 253—1946

SUBTITLES

Lamb waves. **18**: 200—1946

Rayleigh waves. **18**: 200—1946

Shear waves. **18**: 200—1946

11. Waves and Vibrations

11.1 General, Unclassified

PAPER

Fifty horsepower siren. R. Clark Jones. **18**: 371—1946

11.3 Propagation of Sound. Absorption during Propagation. Velocity of Sound (see also 10.4)

PAPERS

Jungle acoustics. Carl F. Eyring. **18**: 257—1946

Propagation of plane sound waves in rarefied gases. Hsue-shen Tsien and Richard Schamberg. **18**: 334—1946

Propagation of sound in the atmosphere—attenuation and fluctuations. Vern O. Knudsen. **18**: 90—1946

Propagation of sound in an inhomogeneous and moving medium, I. D. Blokhintzev. **18**: 322—1946

Propagation of sound in an inhomogeneous and moving medium, II. D. Blokhintzev. **18**: 329—1946

Ray computation for non-uniform fields. John S. Saby and Wesley L. Nyborg. **18**: 316—1946

Reflection of sound signals in the troposphere. G. W. Gilman, H. B. Coxhead, and F. H. Willis. **18**: 274—1946

Theory of propagation of sound in a half-space of variable sound velocity under conditions of formation of a shadow zone. C. L. Pekeris. **18**: 295—1946

Theory of the propagation of sound in scattering and absorbing media. M. P. Givens, W. L. Nyborg, and H. K. Schilling. **18**: 284—1946

Transmission, reflection, and guiding of an exponential pulse by a steel plate in water. II. Experiment. M. F. M. Osborne and S. D. Hart. **18**: 170—1946

ABSTRACTS

Attenuation of sound in fogs and clouds. Vern O. Knudsen. **18**: 245—1946

Attenuation of sound waves in water by a reverberation method. R. W. Leonard. **18**: 252—1946

Correlations between ultrasonic and micrometeorological phenomena. Carl E. Drumheller, Harold K. Schilling, and Howard A. Thorpe. **18**: 246—1946

Jungle acoustics. Carl F. Eyring. **18**: 245—1946

Propagation of an acoustic wave along an absorbing boundary. Isadore Rudnick. **18**: 245—1946

Propagation of sound over absorbent surfaces. Richard K. Cook. **18**: 252—1946

Transmission, reflection, and guiding of an exponential pulse by a steel plate in water. II. Experiment. M. F. M. Osborne and S. D. Hart. **18**: 251—1946

Ultrasonic propagation in a uniform atmosphere. M. P. Givens, W. L. Nyborg, W. H. Pielemeier, and John S. Saby. **18**: 245—1946

SUBTITLES

Absorption coefficients for air containing water vapor. **18**: 91—1946

Absorption coefficients for oxygen containing water vapor. **18**: 91—1946

Attenuation of sound in a atmosphere containing small particles as dust, smoke, or fog. **18**: 93—1946

Dependence of amplitude and wave-length of two-dimensional ballistic shock waves on miss-distance. **18**: 110—1946

Thermodynamic method of computing the energy dissipation (with propagation) of plane ballistic shock waves in air. **18**: 105—1946

11.4 Radiation from Vibrating Objects. Acoustical Impedance. Mechanical Impedance (see also 5.3)

PAPERS

Directional characteristics of a free-edge disk mounted in a flat baffle or in a parabolic horn. Frank H. Slaymaker, Willard F. Meeker, and Lynn L. Merrill. **18**: 355—1946

Effects of finite baffles on response of source with back enclosed. Rudolph H. Nichols, Jr. **18**: 151—1946

Motional impedance analysis applied to a dynamic microphone. J. E. White. **18**: 155—1946

Violation of the reciprocity theorem in linear passive electromechanical systems. Edwin M. McMillan. **18**: 344—1946

ABSTRACTS

Directional characteristics of a free-edge disk mounted in a flat baffle or in a parabolic horn. Frank H. Slaymaker, Willard F. Meeker, and Lynn L. Merrill. **18**: 251—1946

High frequency radiation from a cylinder of arbitrary cross section. M. Lax and H. Feshbach. **18**: 251—1946

11.5 Sounds of Finite Amplitude. Distortion

PAPERS

Determination of the wave forms and laws of propagation and dissipation of ballistic shock waves. Jesse W. M.

DuMond, E. Richard Cohen, W. K. H. Panofsky, and Edward Deeds. **18**: 97—1946
Fifty horsepower siren. R. Clark Jones. **18**: 371—1946

11.7 Theory of Waves and Vibrating Systems (see also 5.4)

PAPERS

Transmission, reflection, and guiding of an exponential pulse by a steel plate in water. II. Experiment. M. F. M. Osborne and S. D. Hart. **18**: 170—1946
Violation of the reciprocity theorem in linear passive electromechanical systems. Edwin M. McMillan. **18**: 344—1946

ABSTRACTS

Echo formation on simple surfaces. C. E. Mongan, Jr. **18**: 255—1946
Transient analysis of linear systems, using underwater explosion waves. M. F. M. Osborne and J. L. Carter. **18**: 252—1946
Transmission, reflection, and guiding of an exponential pulse by a steel plate in water. II. Experiment. M. F. M. Osborne and S. D. Hart. **18**: 251—1946

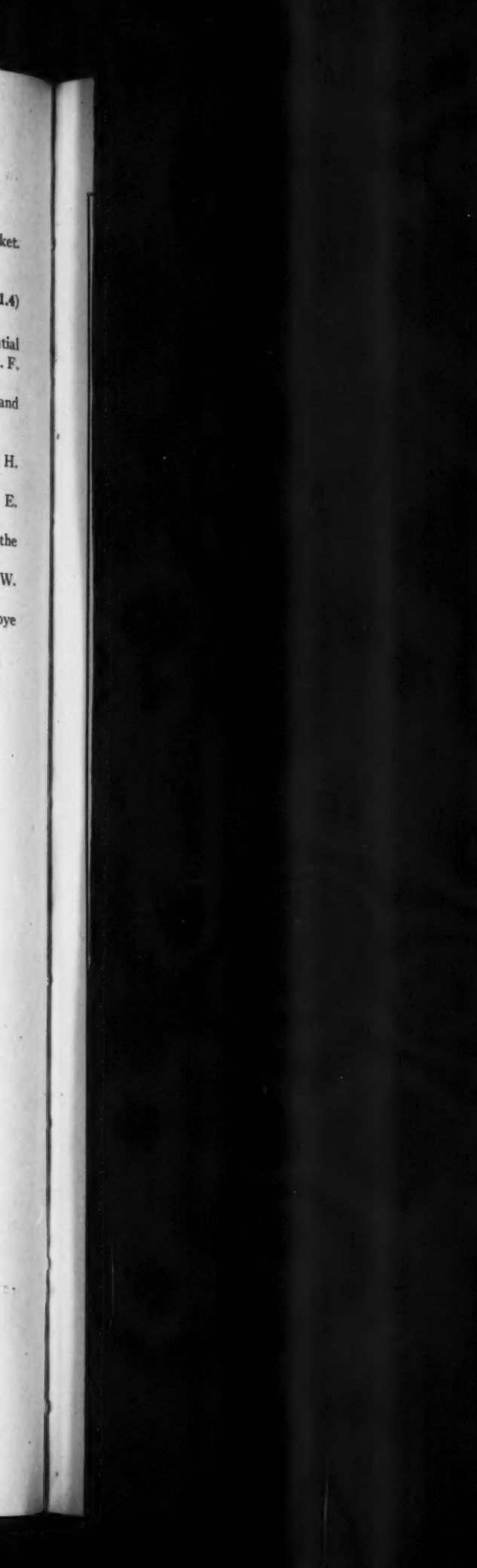
SUBTITLE

On the vibrations of a whirling wire. A. Victor Masket. **18**: 216—1946 L.E.

11.9 Underwater Sound (see also 5.10, 10.5, 11.3, and 11.4)

PAPERS

Transmission, reflection, and guiding of an exponential pulse by a steel plate in water. II. Experiment. M. F. M. Osborne and S. D. Hart. **18**: 170—1946
Underwater noise due to marine life. Donald P. Loye and Don A. Proudfoot. **18**: 446—1946

ABSTRACTS

Attenuation of underwater sound. F. A. Everest and H. T. O'Neil. **18**: 255—1946
Stratification of sound scatterers in the ocean. G. E. Duvall and R. J. Christensen. **18**: 254—1946
Transmission of high frequency sound well beneath the ocean surface. M. J. Sheehy. **18**: 255—1946
Types of underwater sound transmission. Robert W. Young. **18**: 255—1946
Underwater noises due to marine life. Donald P. Loye and Don A. Proudfoot. **18**: 247—1946